In the Claims

1. (Original) A method of controlling contactor switching comprising the steps of:

monitoring voltage in an electrical system having a power source and a load;

closing at least a first contactor of a multi-contactor assembly at a first phase angle following a voltage zero-crossing in the system, the multi-contactor assembly configured to regulate power supplied to the load by the power source; and thereafter

closing another contactor of the multi-contactor assembly at a prescribed moment following the closing of the first contactor.

2. (Original) The method of claim 1 wherein the prescribed moment includes a second phase angle of the voltage in the system.

3. (Original) The method of claim 2 wherein the specified phase angle depends upon a power factor of the load.

4. (Original) The method of claim 3 wherein the first phase angle is approximately 60° and the second phase angle is approximately 90°.

5. (Original) The method of claim 1 further comprising the step of delaying the closing of the another contactor until expiration of a wait period.

6. (Original) The method of claim 5 wherein the wait period is defined by a time between transmission of a switching command and closing of a contactor.

7. (Original) The method of claim 1 wherein the at least a first contactor includes a first contactor and a second contactor, and further comprising the step of closing the first and the second contactors simultaneously.

8. (Original) The method of claim 7 wherein the multi-contactor assembly includes at least one contactor for each phase of a poly-phase load.

9. (Original) The method of claim 8 wherein the poly-phase load includes three phases.

10. (Original) A modular contactor system comprising:

a plurality of stationary contacts and a plurality of movable contacts housed within a single contactor assembly;

a plurality of actuating assemblies, each in operable association with at least one movable contact; and

a controller in operable association with the plurality of actuating assemblies and configured to cause less than all the plurality of movable contacts to engage less than all the plurality of stationary contacts when the controller receives a closed circuit command signal.

11. (Original) The modular contactor system of claim 10 wherein the plurality of stationary contacts and the plurality of movable contacts are arranged into sets of contact assemblies such that the contactor assembly includes a set of contact assemblies for each phase of a poly-phase power source.

12. (Original) The modular contactor system of claim 11 wherein the less than all the movable contacts and the less than all stationary contacts correspond to a single set of contact assemblies.

13. (Original) The modular contactor system of claim 12 wherein the controller is further configured to engage the plurality of stationary contacts and the plurality of movable contacts in another set of contact assemblies only after the less than all the movable contacts and the less than all the stationary contacts have engaged one another.

14. (Original) The modular contactor system of claim 13 wherein the controller is further configured to close the another set of contact assemblies at a moment that is defined by a specified phase angle of system voltage.

15. (Original) The modular contactor system of claim 14 wherein the specified phase angle is between approximately 65° and approximately 90°.

16. (Original) A controller to independently regulate closing of contactors of a modular contactor assembly independently, the controller programmed to:

transmit a first contactor close signal to at least one actuating assembly for a pair of contactors at a first moment after a preceding zero voltage in an electrical system so as to close the pair of contactors; and

transmit a second contactor close signal to an actuating assembly for a third contactor at a second moment after the first moment so as to close the third contactor such that at least one of high transient current and resultant negative torque oscillations in the electrical system are minimized.

17. (Original) The controller of claim 16 wherein the pair of contactors and the third contactor are arranged in a single contactor assembly housing.

18. (Original) The controller of claim 17 wherein the single contactor housing includes a contactor for each phase of a poly-phase load.

19. (Original) The controller of claim 16 further programmed to delay transmission of the close contactor signal to the pair of contactors until expiration of a delay period.

20. (Original) The controller of claim 16 further programmed to transmit the first close contactor signal to the pair of contactors such that the pair of contactors is closed approximately 60° after the zero voltage.

21. (Original) The controller of claim 16 further programmed to transmit the second close contactor signal to the actuating assembly for the third contactor such that the third contactor is closed approximately 90° after the zero voltage.